

**NEW SPECIES OF *ASPIRHINA* KIRBY FROM THE
NEOTROPICAL REGION
(HYMENOPTERA: CHALCIDIDAE)**

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Abstract.—Four new *Aspirhina* Kirby are described from the Neotropical region: *A. alvarengai* NEW SPECIES, *A. bifurca* NEW SPECIES, *A. deceptor* NEW SPECIES, and *A. spinosa* NEW SPECIES. *Aspirhina dubitator* (Walker), the only previously described species, is redescribed and its female is described for the first time. Characters are presented to distinguish *Aspirhina* from other Neotropical Chalcididae. No biological information is known for members of the genus *Aspirhina*.

Key Words.—Insecta, *Aspirhina*, Neotropical, Chalcididae, Chalcidoidea, Hymenoptera

The genus *Aspirhina* was proposed by Kirby (1883) for a Brazilian species that Walker (1862) originally described as *Halticella* [correctly *Haltichella*] *dubitator*. Since then, no other species were added or described in *Aspirhina*. Four new species from the Neotropical region are described in this paper. A key to the species of *Aspirhina* and diagnostic characters for the genus are presented. No biological or host information is known for *Aspirhina*, and their potential as biological control agents is unassessed. Overall, a total of 25 specimens were examined, indicating that *Aspirhina* are rare in collections.

Aspirhina is distinguished from other genera of New World Chalcididae by the following character combination: hind tibia truncate apically, two apical spurs present (Haltichellinae); marginal vein reaching anterior margin of forewing, post-marginal and stigmal veins present (Haltichellini); vertex of head not produced into horns; preorbital carina strong, arch-like above anterior ocellus; pronotum with a carina along anterior margin except at median; forewing clouded, a darker spot under marginal vein; scutellum with a posteriorly projecting triangular to finger-like process, never with a small median tooth; tergum I dorsally with at least three longitudinal carinae at base, originating from a transverse carina.

Museum acronyms for specimen depositories are: American Museum of Natural History, New York (AMNH); British Museum of Natural History, London (BMNH); Canadian National Collection, Ottawa (CNC); Florida State Collection of Arthropods, Florida Department of Agriculture and Consumer Affairs, Gainesville (FSCA); J. A. Halstead, personal collection (JAHC); and U.S. National Museum of Natural History, Washington, D.C. (USNM). Abbreviations include "T" for tergum or terga (e.g., T1 for tergum I). Distributional information for paratypes and material examined is listed alphabetically by country and location, respectively.

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KEY TO SPECIES OF *ASPIRHINA*

- 1 Tergum I dorsally punctate, with four longitudinal carinae (rarely five carinae) in which outermost carinae are about $0.5 \times$ length of innermost carinae (Fig. 1a); scutellar projection apically emarginate to forked (Figs. 12a, 12b) and dorsally punctate (Fig. 1b) *alvarengai* NEW SPECIES
- Tergum I dorsally smooth, with three or four longitudinal carinae of about equal length (Figs. 2a, 3a, 4a, 5a); scutellar projection usually not as above 2
- 2(1) Tergum I dorsally with three longitudinal carinae (Fig. 3a); scutellar projection apically rounded (Fig. 11) and dorsally striate (Fig. 3b) ..
..... *spinosa* NEW SPECIES
- Tergite I dorsally with four longitudinal carinae; scutellar projection not as above 3
- 3(2) Scutellar projection apically rounded (Fig. 14); hind femur with teeth on ventral margin extending $0.66 \times$ hind femur length (Fig. 9)
..... *dubitator* (Walker)
- Scutellar projection apically emarginate to forked (Figs. 13, 15); hind femur with teeth on ventral margin extending $0.5 \times$ or less hind femur length 4
- 4(3) Scutellar projection apically emarginate (Fig. 13) and dorsally punctate (Fig. 4b) *deceptor* NEW SPECIES
- Scutellar projection apically forked (Fig. 15) and dorsally striate (Fig. 5b) *bifurca* NEW SPECIES.

ASPIRHINA DUBITATOR (WALKER)
(Figs. 2a, 2b, 9, 14)

Halticella dubitator Walker, 1862: 366.

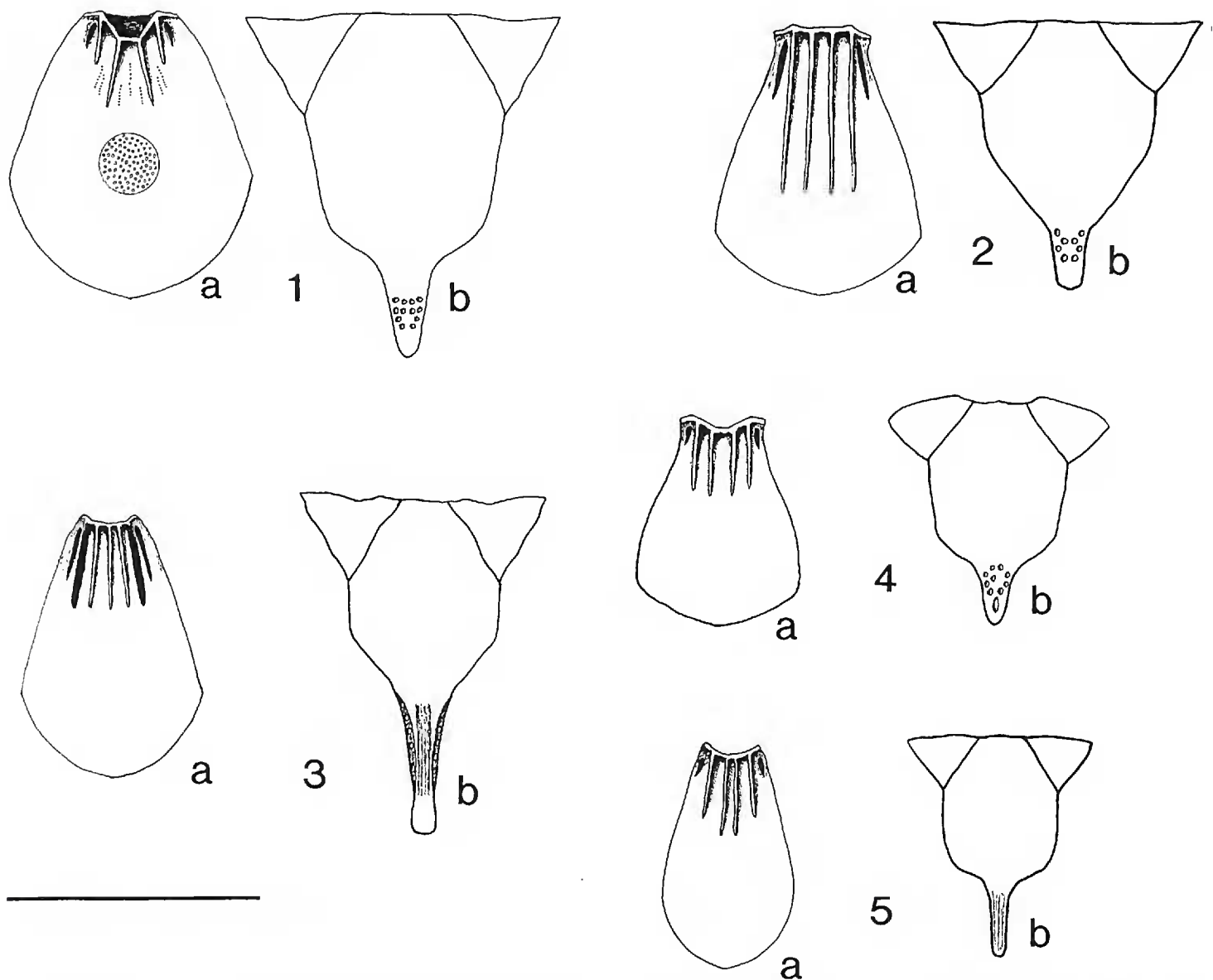
Aspirhina dubitator (Walker); Kirby 1883: 60.

Types. — Holotype, male; data: "Brazil, *Aspirhina dubitator* Walker, B.M. TYPE 5.555." Examined by author. Holotype resides in the British Museum of Natural History, London.

Description. — *Male* (holotype). *Body length:* 5.2 mm. *Color:* black with tegula, fore leg, mid leg (except coxa), hind trochanter, and apical half of hind tibia orange. *Pronotum and Mesoscutum:* dorsally without a median carina. *Scutellum:* in lateral view with dorsal margin straight and apex of projection finger-like, blunt (Fig. 14); in dorsal view apical projection $0.25 \times$ maximum scutellar length (Fig. 2b); sculptured with oval setigerous punctures separated by 0.5 to $1.0 \times$ puncture diameter; 16 punctures along midline between base and apex; integument smooth and polished except weakly coriaceous basally, apical projection punctate except at apex. *Hind femur:* oval; teeth on ventral margin extending $0.66 \times$ hind femur length (Fig. 9). *Gaster:* pubescence silver on T1–2, remainder of terga with gold pubescence. *T1:* dorsally with four longitudinal carinae, extending $0.66 \times$ T1 length (Fig. 2a), integument polished.

Female. Like male, but pubescence of gaster entirely silver and hind tibia and hind femur (basally and apically) orange.

Diagnosis. — *Aspirhina dubitator* may be distinguished from other *Aspirhina* by its unique combination of the characters: tergum I dorsally smooth and with four longitudinal carinae which are about equal in length (Fig. 2a), scutellar projection



Figures 1–5. *Aspirhina* spp., males. Tergum 1 (a) and scutellum (b), dorsal views. Sculpture of apical projection of scutellum and punctation of tergum 1 (circle insert) illustrated. 1. *A. alvarengai* NEW SPECIES. 2. *A. dubitator*. 3. *A. spinosa* NEW SPECIES. 4. *A. deceptor* NEW SPECIES. 5. *A. bifurca* NEW SPECIES. Scale line 1.0 mm.

apically rounded (Fig. 14) and dorsally punctate (Fig. 2b), and teeth on ventral margin of hind femur extending $0.66 \times$ hind femur length (Fig. 9).

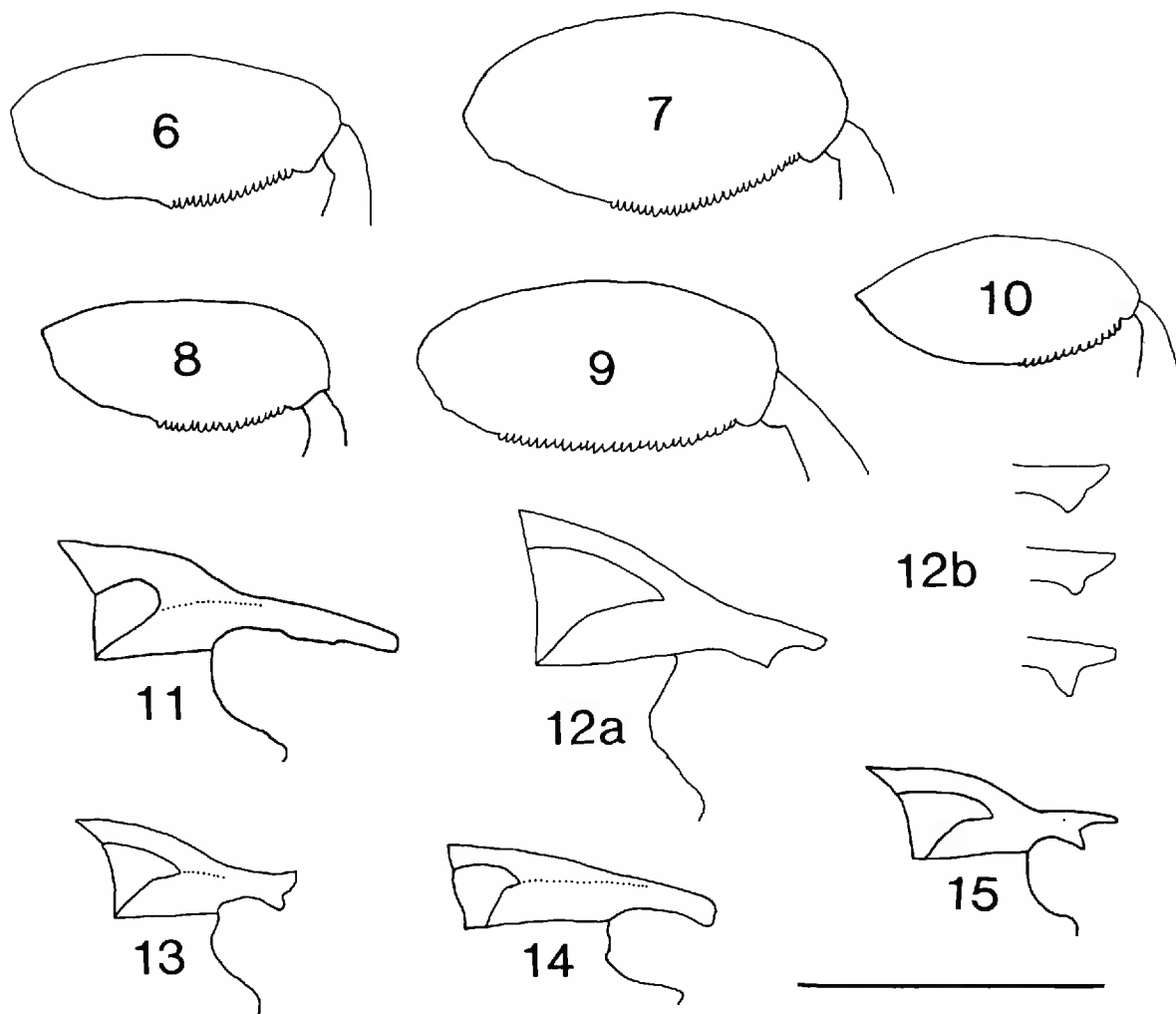
Variation.—*Male*. Longitudinal carinae of T1 vary in length from 0.6 to $0.8 \times$ T1 length. Two specimens with only fore and mid leg brown and tarsi orange. One specimen with hind leg (except coxa and central area of outside of femur) orange. *Female*. Known only from specimen described, which is deposited in the AMNH.

Distribution.—Brazil.

Material Examined.—BRAZIL. AMAZONAS ESTIRAR DE EQUADOR: Rio Javari, Sep 1979, M. Alvarenga, 4 males (CNC). MATO GROSSO: Sinop, Oct 1974, Malaise trap, M. Alvarenga, 1 male (JAH). RODONIA: Rio Guapore opposite mouth of Rio Baures, 1–5 Oct 1964, Bouseman and Lussenhop, 1 female.

ASPIRHINA BIFURCA HALSTEAD, NEW SPECIES
(Figs. 5a, 5b, 10, 15)

Types.—Holotype, male; allotype, female; data: “BOLIVIA, Beni: Rio Itenez opposite Costa Marques (Brazil), Sept. 4–6, 1964, Bouseman & Lussenhop.” Holotype and allotype reside in the American Museum of Natural History, New



Figures 6–15. *Aspirihina* spp., males. Figs. 6–10. Hind femur, lateral view. Figs. 11–15. Scutellum, lateral view. 6, 11. *A. spinosa* NEW SPECIES. 7, 12a, 12b. *A. alvarengai* NEW SPECIES, 12b-variation in apex of scutellum. 8, 13. *A. deceptor* NEW SPECIES. 9, 14. *A. dubitator*. 10, 15. *A. bifurca* NEW SPECIES. Scale line 1.0 mm.

York. *Paratypes*: 1 male with same data and depository as holotype; BRAZIL. GOIAS: Jatai, Nov 1972, F. M. Oliveira, 1 male (USNM). COSTA RICA. San Isidro de General, 700–800 m, Aug 1980, N.L.H. Krauss, 1 male (JAHC, from AMNH). ECUADOR. PICHINCHA: 47 km S of Santo Domingo Rio Palenque Station, 21–25 Feb 1979, S. and J. Peck, 1 male (CNC).

Description. — *Male* (holotype). *Body length*: 3.8 mm. *Color*: black with tegula and legs (except central area of outside of hind femur) orange; antenna, apical projection of scutellum, hind femur centrally, and hind coxa brown. *Pronotum and Mesoscutum*: dorsally without a median carina. *Scutellum*: in lateral view with dorsal margin convex and apex of projection forked (Fig. 15); in dorsal view apical projection $0.35 \times$ maximum scutellar length (Fig. 5b); sculptured with oval setigerous punctures separated by 0.12 to $0.33 \times$ puncture diameter; 12 punctures along midline between base and apex; integument sculpture coriaceous, anterior projection faintly striated to apex. *Hind femur*: oval; teeth on ventral margin extending $0.42 \times$ hind femur length (Fig. 10). *Gaster*: pubescence silver on T1–2, remainder of terga with gold pubescence. *T1*: dorsally with four longitudinal carinae, extending $0.4 \times$ T1 length (Fig. 5a), integument polished.

Female (allotype). Like male, but body length 4.2 mm, legs completely orange, and antenna slenderly filiform.

Diagnosis. — *Aspirihina bifurca* may be distinguished from other *Aspirihina* by its unique combination of the characters: tergum I dorsally smooth and with four longitudinal carinae which are about equal in length (Fig. 5a), scutellar projection apically forked (Figs. 15) and dorsally striate (Fig. 5b), and teeth on ventral margin of hind femur extending $0.42 \times$ length of hind femur (Fig. 10).

Variation.—*Male.* One paratype with hind femur completely orange; another paratype with hind femur completely brown. Apical projection of scutellum varies slightly in length and width. Some specimens with striation on projection confined to apical half. *Female.* Known only from allotype.

Distribution.—Bolivia, Brazil, Costa Rica, and Ecuador.

Etymology.—The specific name (Latin) refers to the forked apical projection of the scutellum.

Material Examined.—This species is known only from the type specimens.

ASPIRHINA ALVARENGAI HALSTEAD, NEW SPECIES
(Figs. 1a, 1b, 7, 12a, 12b)

Types.—Holotype, male; data: "BOLIVIA: Dept. Beni, Romansos, 1 km. N. Junction Rio Itenez & Rio Paragua, VII-30-1964, J. K. Bouseman and L. Lussenhop Collectors." Holotype resides in the American Museum of Natural History, New York. *Paratypes:* BOLIVIA. SANTA CRUZ: Gral. Saavedra Est. Experimental, Aug 1973, Malaise trap, C. Porter and L. Stange, 1 male (FSCA). BRAZIL. Pedra Azul, M. Gerais, Nov 1972, Seabra and Oliveira, 1 male (CNC). CEARA: Brasalha, May 1969, M. Alvarenga, 1 male (CNC). RONDONIA: Rio guapore opposite mouth of Rio Baures, 1–5 May 1964, Bouseman and Lussenhop, 1 male (AMNH). BAHIA: Encruzilhada, 960 m, Nov 1974, M. Alvarenga, 1 male (CNC). PANAMA. Barro Colorado Island Canal Zone, 14 Mar 1956, C. W. and M. E. Rettenmeyer, 1 male (USNM). SURINAME. Saramaca, Prov. Raleigh Vallen N. P. Foengoe Is., 22–31 Jan 1985, T. Thormin, 1 male (JAHC, from CNC).

Description.—*Male* (holotype). *Body length:* 6.0 mm. *Color:* black with apices of tibia and tarsus of fore and mid legs orange. *Pronotum and Mesoscutum:* dorsally without a median carina. *Scutellum:* in lateral view with dorsal margin nearly straight but steeply angled and apex of projection longer dorsally than ventrally (Fig. 12a); in dorsal view apical projection $0.29 \times$ maximum scutellar length (Fig. 1b); sculptured with oval setigerous punctures separated by 0.25 to $0.5 \times$ puncture diameter; 14 punctures along midline between base and apex; integument sculpture coriaceous, apical projection punctate except at apex. *Hind femur:* oval; teeth on ventral margin extending $0.52 \times$ hind femur length (Fig. 7). *Gaster:* pubescence silver on T1–2, remainder of terga with gold pubescence. *T1:* dorsally with four longitudinal carinae, extending $0.33 \times$ T1 length (Fig. 1a), sculpture punctate.

Female. Unknown.

Diagnosis.—*Aspirhina alvarengai* may be distinguished from other *Aspirhina* by its unique combination of the characters: tergum I dorsally smooth and with four longitudinal carinae in which the outermost carinae are about $0.5 \times$ length of innermost carinae (Fig. 1a), scutellar projection apically emarginate to forked (Figs. 12a, 12b) and dorsally punctate (Fig. 1b), and teeth on ventral margin of hind femur extending $0.52 \times$ length of hind femur (Fig. 7).

Variation.—*Male.* Apical projection of scutellum varies from weakly to strongly emarginate (Figs. 12a, 12b). Outermost longitudinal carina of T1 rarely shorter than the innermost carinae. Tergum I commonly smooth and polished at base. Two paratypes with punctures of T1 vague (Panama) to absent (Bolivia); integument smooth and polished though indications of punctures evident. One paratype (Bolivia) with five longitudinal carinae on T1.

Distribution.—Bolivia, Brazil, Panama, and Suriname.

Etymology.—Named for M. Alvarenga who collected much of the *Aspirhina* material.

Material Examined.—This species is known only from the type specimens.

ASPIRHINA SPINOSA HALSTEAD, NEW SPECIES
(Figs. 3a, 3b, 6, 11)

Types.—Holotype, male; data: "BRAZIL, Serrade Bocaina S. Paulo, XI-1968, 1600 m, M. Alvarenga." Holotype resides in the Canadian National Collection, Ottawa. *Paratype*: 1 male with same data and depository as holotype.

Description.—*Male* (holotype). *Body length*: 4.5 mm. *Color*: black with apices of tibia, tarsus of fore and mid legs, and club of antenna orange. *Pronotum and Mesoscutum*: dorsally with a median carina. *Scutellum*: in lateral view with dorsal margin convex and apex of projection rounded (Fig. 11); in dorsal view apical projection $0.4 \times$ maximum scutellar length (Fig. 3a); sculptured with oval setigerous punctures separated by 0.12 to $0.17 \times$ puncture diameter; 10 punctures along midline between base and apex; integument sculpture coriaceous; apical projection with a median, striated carina, punctate laterally below carina. *Hind femur*: oval; teeth on ventral margin extending $0.37 \times$ hind femur length (Fig. 6). *Gaster*: pubescence silver on T1–2, remainder of terga with gold pubescence. *T1*: dorsally with three longitudinal carinae, extending $0.33 \times$ T1 length (Fig. 3b), integument polished; on each side of lateral carina a long furrow extending length of longitudinal carinae; T1 somewhat fused with T2 but separation between them evident.

Female. Unknown.

Diagnosis.—*Aspirhina spinosa* may be distinguished from other *Aspirhina* by its unique combination of the characters: tergum I dorsally smooth and with three longitudinal carinae which are about equal in length (Fig. 3a), scutellar projection apically rounded (Fig. 11) and dorsally striate (Fig. 3b), and teeth on ventral margin of hind femur extending $0.37 \times$ length of hind femur (Fig. 6).

Variation.—Paratype male with antenna brown, hind tarsus orange, and median carina on mesoscutum vague.

Distribution.—Brazil and Bolivia.

Etymology.—The specific name (Latin) refers to the long, slender apical projection of the scutellum.

Material Examined.—This species is known only from the type specimens.

ASPIRHINA DECEPTOR HALSTEAD, NEW SPECIES
(Figs. 4a, 4b, 8, 13)

Types.—Holotype, male; data: "BOLIVIA, Beni: Rio Itenez opposite Costa Marques (Brazil), Sept. 4–6, 1964, Bouseman & Lussenhop." Holotype resides in the American Museum of Natural History, New York.

Description.—*Male* (holotype). *Body length*: 4.1 mm. *Color*: black with antenna, tegula, and legs brown. *Pronotum and Mesoscutum*: dorsally without a median carina. *Scutellum*: in lateral view with dorsal margin convex and apex of projection slightly incised (Fig. 13); in dorsal view apical projection $0.29 \times$ maximum scutellar length (Fig. 4b); sculptured with oval setigerous punctures separated by 0.12 to $0.5 \times$ puncture diameter; nine punctures along midline between base and apex; integument sculpture coriaceous, apical projection punctate to apex. *Hind femur*: oval; teeth on ventral margin extending $0.5 \times$ hind femur length (Fig. 8). *Gaster*: pubescence silver on T1–2, remainder of terga with gold pubescence. *T1*: dorsally with four longitudinal carinae, extending $0.33 \times$ T1 length (Fig. 4a), integument polished.

Female. Unknown.

Diagnosis.—*Aspirhina deceptor* may be distinguished from other *Aspirhina* by its unique combination of the characters; tergum I dorsally smooth and with four longitudinal carinae which are about equal in length (Fig. 4a), scutellar projection apically emarginate (Fig. 13) and dorsally punctate (Fig. 4b), and teeth on ventral margin of hind femur extending $0.5 \times$ length of hind femur (Fig. 8).

Variation.—Unknown. Species known only from type specimen.

Distribution.—Bolivia.

Etymology.—The specific name (Latin) refers to this species' ability to elude collectors.

Material Examined.—This species is known only from the type specimen.

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